

The Interagency Board for Standardization and

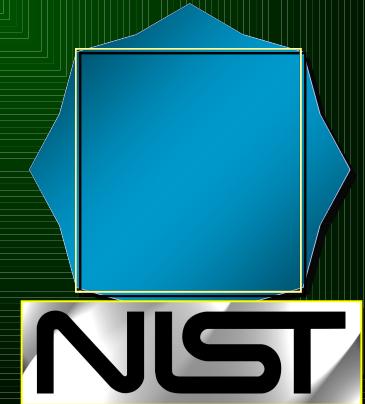


*Strengthening
National Readiness
through Standards*

Kathleen Higgins

Director

Office of Law Enforcement Standards
National Institute of Standards and Technology



1990



IN SUBSTANCE

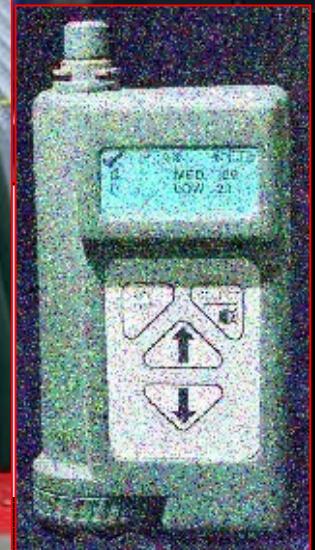
1998

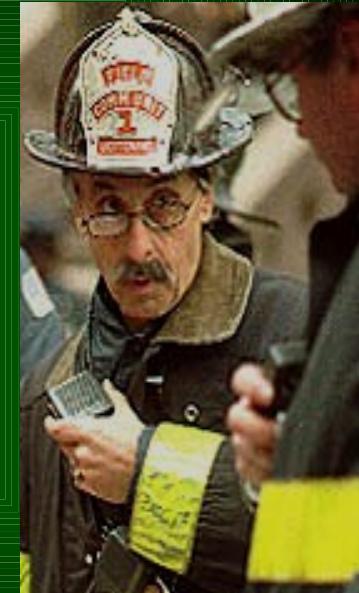


CMPIO WMDO



IAB
Mission:
Help agencies
prepare by providing
guidance on equipment





Personal Protection & Operational Equipment **Detection & Decontamination Equipment** **Medical Equipment & Procedures** **Interoperable Communications & Information Systems**



IAB Chair (State/Local)



Personal Protection & Operational Equipment

contamination

Interoperable Communications & Information Systems



**IAB
Chair
(State/Local
Organization)**

SEL

Standardized Equipment List

**Personal
Protection
& Operational
Equipment**

Detection &

contamination

Medical

**Interoperable
Communications
& Information
Systems**



**IAB
Chair
(State/Local
Organization)**

**Federal
Coordination
Committee
(FCC)**

**Science &
Technology
Committee
(S&T)**

**Standards
Coordination
Committee
(SCC)**

SubGroups

**Personal
Protection
& Operational
Equipment**

**Detection &
contamination**

Medical

**Interoperable
Communications
& Information
Systems**



~~Object Equipment Evaluation~~



~~Performance Standards~~

Need for Minimum Performance Standards



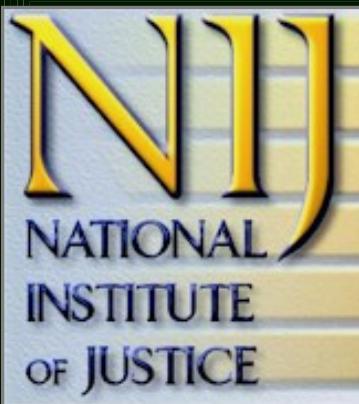
Compliance Testing Programs



Standards Coordination Committee

*Supports IAB SubGroups
in establish performance
standards and testing programs
for CBRNE equipment*

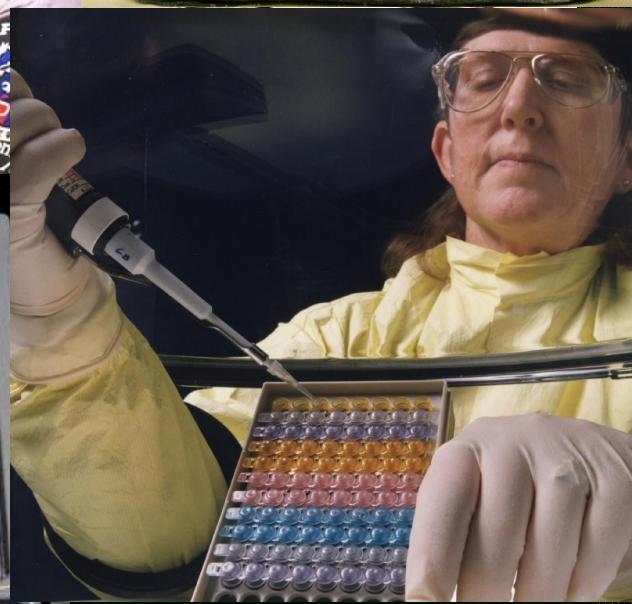
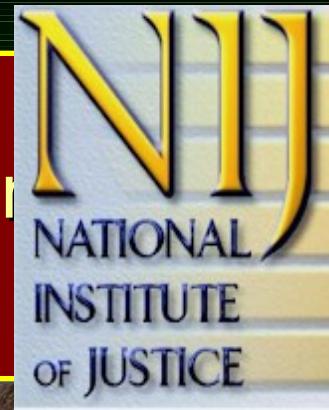


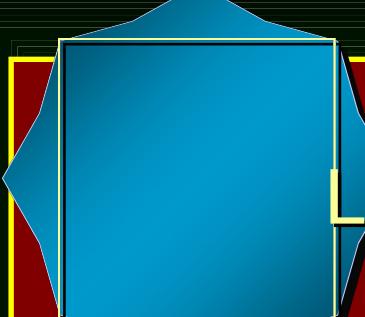


TSWG



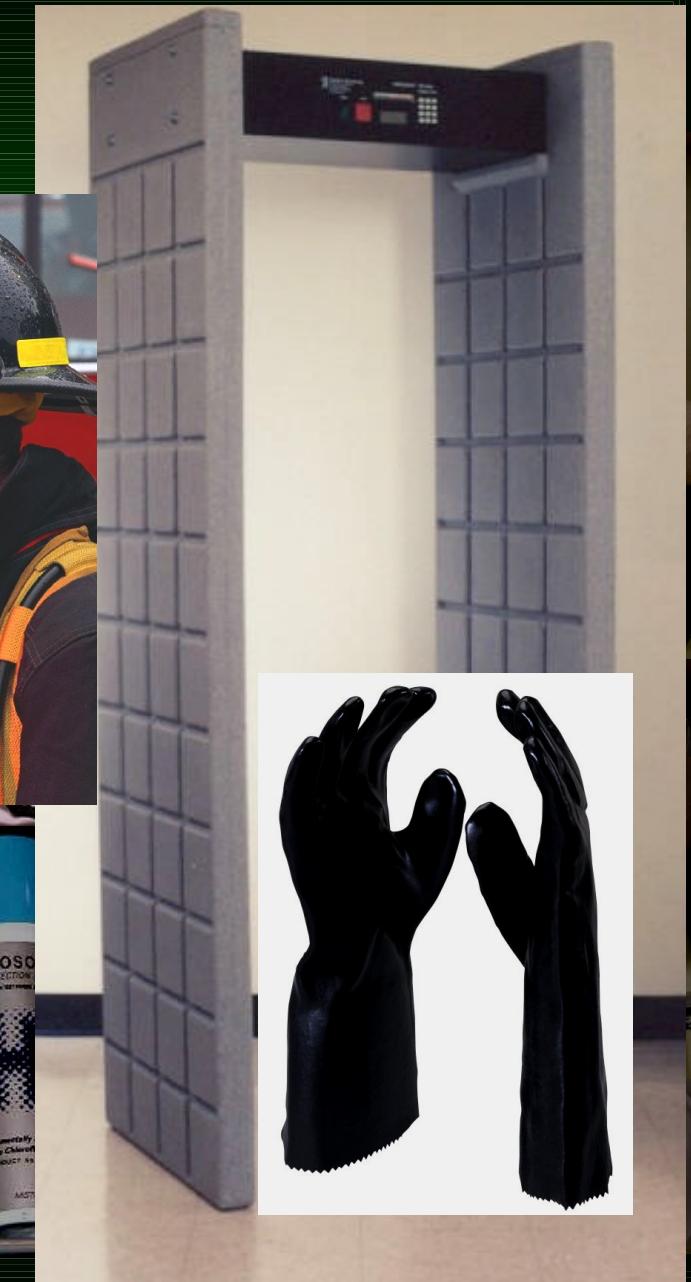
Office of Law Enforcement Standards (OLES)

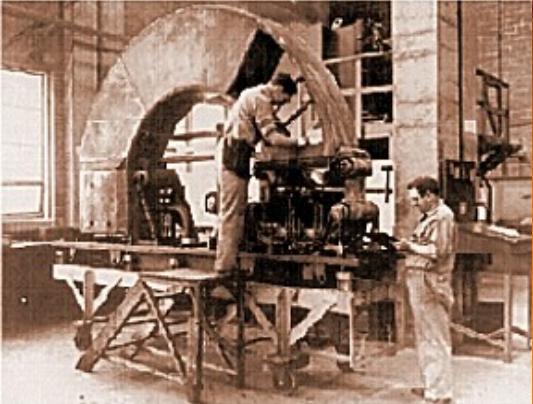




Office of Law Enforcement Standards (OLES)

NIST



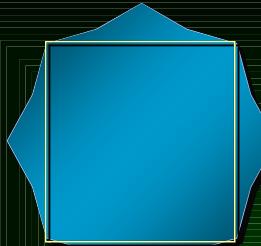


NIST



NIST Police Scientific Development Branch UK

- Royal Canadian Mounted Police
- Information Administration
- Technical Support Working Group
- National Cybercrime Training
- Bureau of Justice Statistics, Attorney General Partnership
- United States Secret Service
- National Fire Protection Association
- University of Utah Center for
- Human Toxicology
- National Institute for
- University of Virginia
- Occupational Health and Safety
- White House Office of Science
- White House Office of Health
- White House Office of Preparedness
- NIST Measurements Standards



Program Areas



Weapons and Protective
Systems

Detection, Inspection and
Enforcement Technologies

Forensic Sciences

Public Safety

Critical Incident
Technologies



Standards Coordination Committee

GB (Sarin)

type of
filtration?

acceptable
effectiveness?

concentration?

exposure?

life of filter?





Standards Coordination Committee Early Achievements

- ✓ Threat/Hazard Assessments
- ✓ WMD Computer Simulations
- ✓ Reviews of Existing Standards
- ✓ Ongoing Consultation with Researchers, Manufacturers, Technical Experts and First Responders

National Institute of Justice
Law Enforcement and Corrections Standards and Testing Program

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

Table 5-3. Handheld Portable Detection Equipment (CA)
May 2000

Detector Name	Chemical Agents Detected	TIMS Detected	Sensitivity	Resistance to Interferences	Response Time	Start-Up Time	Detection States	Alarm Capability	Portability	Battery Needs	Power Capabilities	Environment	Durability	Unit Cost	Op.
Rae 2000	●	TBD	○	TBD	●	○	●	●	●	●	●	●	●	TBD	●
IC Chemical Agent detector	●	○	●	○	●	●	●	●	●	●	●	●	●	○	●
A-Passport II PID filter	○	TBD	○	TBD	TBD	TBD	●	TBD	TBD	TBD	TBD	TBD	○	○	●
Advanced Portable Detector (APD) 2000	●	○	●	○	●	●	●	●	●	●	●	●	●	○	●
INDIV Individual Agent Detector	○	○	●	●	●	○	●	●	●	NA	NA	●	●	TBD	●

Volume I
June 2000

3.3.3 High Performance Liquid Chromatography (HPLC)

High performance liquid chromatography is most useful in the detection and identification of larger molecular weight chemical agents such as BZ or LSD, and in the detection and identification of biological agents. With HPLC, those compounds that do not easily volatilize can be analyzed without undergoing chemical derivatization. HPLC instrumentation is available from a variety of vendors such as Hewlett Packard, Perkin-Elmer, Shimadzu, and Varian, and is shown in Figures 3-15, 3-16, 3-17, and 3-18. As with GCs, HPLC instruments can be equipped with a variety of detectors such as ultraviolet-visible (uV-Vis) spectrometers, mass spectrometers, fluorescence spectrometers, and electrochemical detectors. Two limitations to the fielding of HPLCs and their detectors are the need for power requirements (120V house current) and high purity solvents. Currently there is no portable HPLC unit available.



Figure 3-15. Hewlett Packard HP1000 HPLC System



Figure 3-16. Perkin-Elmer Turbo LC Plus HPLC System



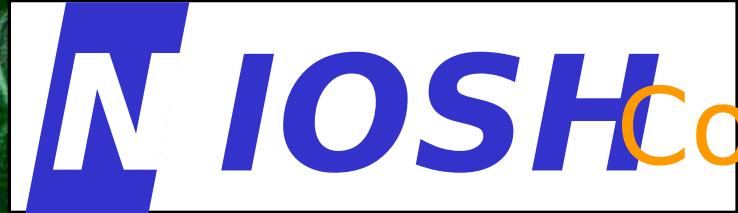
Figure 3-17. Shimadzu LC-10 HPLC System



Figure 3-18. Varian ProStar Analytical HPLC System

CBRNE Equipment User Guides

**Top Priority:
CBRNE Respiratory
Equipment**



Completed Standards

- CBRN SCBA Standard
- CBRN SCBA Certification Testing
- CBRN Escape Mask Standard
- CBRN APR Standard



Coming Soon

- Combination APR/SCBA (2004)
- Closed Circuit SCBA (2004)
- Escape SCBA (2005)
- Supplied Air Respirators (SAB) (2005)

- Vapor-Protective Ensemble for Hazardous Materials Emergencies
- Protective Ensemble for Urban Search and Rescue Operations
- Protective Ensemble for Chemical/Biological Terrorism Incidents
- Standard on Protective Ensemble for Chemical/Biological



Portable Radiation detection Standards

(March 2004)



American
National
Standards
Institute



Selectively Permeable Membranes



Emergency Services Communication Systems

5-Year Plan Projections by Fiscal Year

STANDARDS	FY03	FY04	FY05	FY06	FY07	TOTAL
Respirator Standards	3	1	2	1		7
Personal Protective Equipment		1	3	2		6
Bomb Suit			1	1		2
Chemical Detection		1	1	2	1	5
Biological Detection			1	1	1	3
Radiation Detection	4	2				6
Explosive Detection			1	3	2	6
Explosive Device Mediation				1	2	3
Chem/Bio Decontamination				1	1	2
PPE Comm Interface				1		1
Position Location				1		1
Total Standards	7	5	9	14	7	42
EQUIPMENT GUIDES		2	2	3	3	10

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

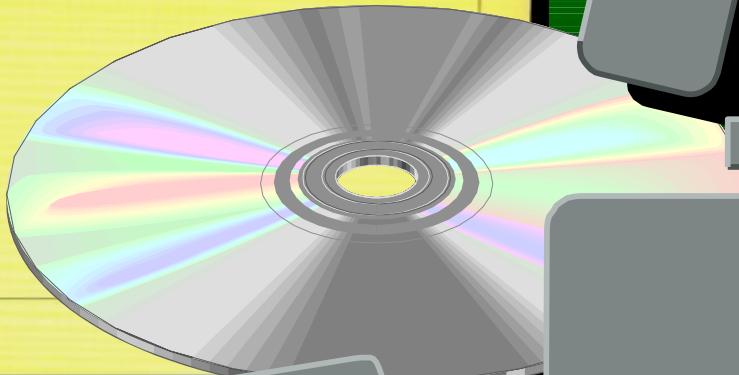


National Institute of Justice

Law Enforcement and Corrections Standards and Testing Program

**Guide for the Selection of
Chemical Agent and Toxic Industrial Material
Detection Equipment for Emergency First Responders**

NIJ Guide 100-00



CBRNE Equipment User Guides

Selection
Care
And
Maintenance

Guides



U.S. Department of
Homeland Security

Science and
Technology Directorate



- ✓ Long-time supporter of SEL and IAB
- ✓ Endorses and funds 5-Year Plan



U.S. Department of
Homeland Security

Science and
Technology Directorate



- ✓ NIOSH CBRN respiratory standards used Agency-wide
- ✓ SEL integrated into MIPT First Responder Database
- ✓ User guides incorporated into MIPT web site



U.S. Department
of
Homeland Security

Science and
Technology Directorate



Grants to state and local
agencies tied to
CBRNE equipment standards



Standards Coordination Committee

SDOs





50,000+
Emergency
Response Organizations



**STAN
DARDS**



Kathleen M. Higgins
(301) 975-2757
kathleen.higgins@nist.gov
www.eeel.nist.gov/oles

